Progress Report
December 1st, 2005

Project Title: EEG Biofeedback Device

Team Members:
Ashley Anderson, Team Leader aandersoniii@wisc.edu
Chris Wegener, Co-Leader cjwegener@wisc.edu
Michele Lorenz, Communicator lorenz@wisc.edu
Ryan Thome, BWIG thome@wisc.edu
Shikha, BSAC shikha@wisc.edu

Client:
Daniel Muller, MD, PhD
Medicine (Rheumatology)
Institute on Aging, Mind-Body Center
2605 MSC
UW-Madison
265-2478 dmuller@wisc.edu

Advisor:
John Webster
Date: 12/1/05

Problem Statement:
(Project Description)
The goal of our project is to design and build an inexpensive, portable electroencephalogram (EEG - brain wave monitor) that teaches meditation practitioners to achieve optimal meditation by the presence of EEG alpha and theta waves.

Restatement of team goals:
1. Meet with client
2. Create Problem statement
3. Work on PDS
4. Begin research and design
a) Research all possible background information.
b) Research existing solutions
e) Develop possible design solutions
5. Continue research, design, and testing
6. Write Midterm paper
7. Finish PowerPoint presentation
8. Discussing possible final design alternative
9. Finalize design
10. Building and testing prototype
11. Present final design

Project Schedule:
09/02/05 – Choose team and project, set up meeting with client
09/09/05 – Meet with client, background research, discuss PDS
09/16/05 – 10/07/05 – Brainstorm, work on design
10/07/05 – Finalize oral presentation
10/14/05 – Oral presentations, written report, PDS, and notebooks are due
10/14/05 – 11/18/05 – Work on design
11/25/05 – Thanksgiving
12/02/05 – Final poster presentations
12/07/05 – Final written report, notebooks due
12/09/05 – Final meeting with advisor

Summary of Team Accomplishments:

1. Built and soldered circuit.
2. Put together poster
3. Combined electrodes, power supply, and circuit.

Summary of Individual Accomplishment:
1. Ashley and Chris continuing building and troubleshooting the amplifier.
2. Chris soldered circuit pieces.
3. Chris put together the components of the poster.
4. Ryan assembled more of the headpiece.
5. Michele printed the poster.

Statement of Team Goals:
1. Make the final design work – combine existing components with plan to produce audio feedback.
2. Put on a great presentation

Difficulties:
The amplifier circuit is not outputting the desired effects. Testing with less interfering generators and oscilloscopes would help improve results, but the equipment we are using makes too much signal noise. Electrodes seem to be picking up something, but without good knowledge of biosignals, we cannot determine if the output is what we are looking for.

Activities:
Ashley - Team meetings 1 hr
Amplifier construction 1.5 hr
Chris - Team meetings 1 hr
Amplifier construction 3.5 hr
Testing 2 hr
Michele - Team meetings 1 hr
Poster work 2 hr
Ryan - Team meetings 1 hr
Electrode construction 1 hr

Shikha - Team meetings 1.5 hr
Team Total Hours for this week: 15.5
Cumulative Team Hours to date: 141